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Remarks

Claims 1-21 are pending in the Application. Claims 3, 5-8, 10, 12, 14 and 17-20 are withdrawn from consideration as being drawn to a non-elected invention. Claim 9 is objected to as discussed below. Claims 1, 2, 4, 13 and 16 are rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 3,669,499 (Semplonius et al.). Claims 1, 2, 4, 9 and 15 are rejected under Section 102(b) as anticipated by or, in the alternative, under Section 103(a) as obvious over U.S. Patent No. 5,913,571 (Dystra et al.). Claim 11 is rejected under Section 103(a) as being unpatentable over Dystra et al. as applied to claims 1, 2, 4, 9 and 15 above, and further in view of U.S. Patent No. 5,988,757 (Vishey et al.). Claim 21 is rejected under 35 U.S.C. §103(a) as being unpatentable over Dystra et al. as applied to claims 1, 2, 4, 9 and 15 above, and further in view of U.S. Patent No. 4,266,707 (Rossman).

Claim Objections

The Examiner indicates that:

[c]laim 9 is objected to because of the following informalities: "the back top panel portion is on a first side of the third bend and the back bottom panel portion" (lines 12-13) should read --the back bottom panel portion is on a first side of the third bend and the lower seat bottom panel portion--. Appropriate correction is required.

As indicated in the Listing of Claims, Applicants have amended claim 9 to indicate that the "back bottom panel portion is on a first side of the third bend and the lower seat bottom panel portion is on a second side of the third bend..." This amendment is supported by original Figure 1-3 as well as previously amended paragraph [0029] which provides that :

The third bend line 40 (shown in phantom) is disposed between the back bottom panel portion 34 and the lower seat bottom panel portion 26 such that the back bottom panel portion 34 is on a first side 50 of the third bend line 40

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and the lower seat bottom panel portion 26 is on a second side 52 of a third bend line 40.

Paragraph [0008] has also been amended for consistency with amended claim 9. Accordingly, the objection to claim 9 is believed to be overcome.

Claim Rejections

Claims 1, 2, 4, 13 and 16: Anticipated by or Obvious Over Semplonius et al.

Semplonius et al.'s Chair is not an Automotive Seat Frame

Claim 1 has been amended to clarify that the seat frame formed by the lower seat portion and the back portion is "*an automotive seat frame*" (emphasis added). As is well known in the art, automotive seat frames must meet strength standards that necessitate structural integrity. As indicated in paragraph [0004] of the Specification, "quick plastic forming can enable complex, contoured shaping desirable for required component strength and rigidity".

Semplonius et al. do not provide an automotive seat frame. On the contrary, Semplonius et al. describe a chair with a molded polystyrene shell 10 (col. 2, lines 10-16) and an injection molded trim shell 20 (col. 2, lines 48-49). One skilled in the art would not understand these components to be suitable for an automotive seat frame. Accordingly, the rejection of claim 1 and of claims 2, 4, 13 and 16 is believed to be overcome for at least this reason.

Semplonius et al.'s Chair is Not Analogous Prior Art

The MPEP provides that:

The examiner must determine what is "analogous prior art" for the purpose of analyzing the obviousness of the subject matter at issue. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then to be reasonably pertinent to the particular problem with which the inventor was

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concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPD2d, 1443, 1445 (Fed. Cir. 1992).

Semplonius et al.'s chair is clearly not intended for use as an automotive seat. Automotive engineers would not consider Semplonius et al.'s chair to be relevant to the automotive seat field given the unique strength considerations of the field. Thus, Semplonius et al.'s chair is not a proper reference for a rejection under Section 103(a). For this reason as well, the Section 103(a) rejection of claims 1, 2, 4 13 and 16 over Semplonius et al. is believed to be overcome.

Semplonius et al.'s Chair is Not Formed by the Methods Recited in Claim 1

As admitted by the Examiner, the shell 10 and trim shell 20 of Semplonius et al. are not:

formed from at least one panel by a method selected from the group consisting of quick plastic forming, super plastic forming and sheet hydro-forming.

Semplonius et al.'s shell 10 and molded trim shell 20 neither involve formation "from at least one panel" nor by quick plastic forming, super plastic forming or sheet hydro-forming, as required by claim 1. Use of the processes recited in claim 1 enables the distinctive structural features, i.e., the strength and rigidity required of the "lower seat portion" and the "back portion" such that they form the "automotive seat frame" of claim 1. Thus, the process limitation recited in claim 1 must be considered by the Examiner.

With respect to the weight to be afforded to process steps in an apparatus claim, Section 2113 of the MPEP provides:

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, *or where the manufacturing steps*

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would be expected to impart distinctive structural characteristics to the final product. See, e.g., In re Garnero, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979) (sic 1969) (holding "interbonded by interfusion" to limit structure of the claimed composition and noting that terms such as "welded," "intermixed," "ground in place," "press fitted," and "etched" are capable of construction as structural limitations.)

In re Garnero (attached as Exhibit A) involved interpretation of an apparatus claim reciting "expanded perlite particles which are interbonded one to another by interfusion between the surfaces of the perlite particles..." The Court of Customs and Patent Appeals reversed the Patent Office Board of Patent Appeals decision that affirmed the Examiner's rejection where the above-mentioned claim was construed as a product claim containing a process, rather than a structural, limitation. The Court disagreed, reasoning:

[I]t seems to us that the recitation of the particles as 'interbonded one to another by interfusion between the surfaces of the perlite particles' is as capable of being construed as a structural limitation as 'intermixed,' 'ground in place,' 'press fitted,' 'etched,' and 'welded,' all of which at one time or another have been separately held capable of construction as structural, rather than process, limitations. . . . *The correct inquiry therefore, it appears to us, is whether the product defined by claim 1 is patentably distinguishable over the disclosures of [the cited references] in view of the structural limitation defining the panel as 'consisting essentially of expanded perlite particles * * * interbonded one to another by interfusion between the surfaces of the perlite particles.' . . . Neither [of the references] disclose expanded perlite particles interbonded one to the other by interfusion between the surfaces thereof; it is not therefore reasonable to view such interbonding to be obvious by considering the references collectively.*

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In re Garnero, 412 F.2d at 279 (emphasis added). A more recent opinion of the Board of Patent Appeals and Interferences, Ex Parte Parker Appeal No. 2001-2406 (Board of Patent Appeals and Interferences), attached hereto as Exhibit B, although not binding precedent, reiterates that a process step may describe a structural relationship and therefore cannot be ignored in an obviousness determination:

[I]n considering the claimed phrase 'a conductive metal sleeve that is shrink-fitted onto said ceramic tube,' the examiner erred in treating the phrase as a product by process limitation, and therefore, ignoring the shrinking-fitted aspect of the recitation. *The application of product by process considerations to a claimed product requires that the structure of the claimed product be essentially the same as the structure of the applied prior art.* ... Although the phrase 'shrink fitted' may describe how the two elements came to be connected together, *the phrase also describes a structural relationship between the two elements which cannot be ignored in considering the obviousness of the claimed invention.* (emphasis added)

Applicant submits that the MPEP Section 2113 requires that the process limitations of claim 1 given little weight by the Examiner, i.e., the formation of an automotive seat from "at least one panel by a method selected from the group consisting of quick plastic forming, super plastic forming and sheet hydro-forming", be treated as structural limitations and afforded full weight by the Examiner as are all of the other structural limitations of claim 1.

For a rejection to be proper as an anticipation under 35 U.S.C. § 102, every element and limitation found in the rejected claim must be found in the 102 reference. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). See MPEP §2131. Semplonius et al. does not teach "an automotive seat frame" that is "formed from at least one panel by a method selected from the group consisting of quick plastic forming, super plastic forming and sheet hydro-forming." Accordingly, the rejection of amended

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claim 1, and of claims 2, 4, 13 and 16 which respectively depend therefrom, as anticipated by Semplonius et al. under Section 102(b) is believed to be overcome for at least this reason as well.

Furthermore, a *prima facie* case of obviousness requires that the prior art references teach or suggest all claim limitations of the examined claim. (MPEP 2143.03) With respect to the alternative Section 103(a) rejection of claims 1, 2, 4, 13 and 16 over Semplonius et al., because all of the limitations of amended claim 1 are not found in Semplonius et al. (see above discussion), the rejection under Section 103(a) is believed to be overcome.

Claims 1, 2, 4, 9 and 15: Anticipated by or Obvious over Dystra et al.

Dystra et al.'s Marine Seat is Not an Automotive Seat Frame

Dystra et al. describe a marine seat:

made of "marine board" which is comprised of a sandwich with two polyethylene outer layers 50 and 52 and a core 54 of a foam material.
(col. 3, lines 47-49)

One skilled in the art of automotive seat design would not understand Dystra et al.'s polyethylene and foam marine seat to be suitable as "an automotive seat" as required by claim 1.

Dystra et al.'s Marine Seat is Not Analogous Prior Art

Automotive engineers would not consider the marine seat of Dystra et al. to be relevant to the automotive seat field with its unique and specific strength considerations and requirements. Thus, as explained above with respect to the rejections under Semplonius et al., Dystra et al.'s marine seat is not a proper reference for a rejection under Section 103(a). For at least this reason, the Section 103(a) rejection of claims 1, 2, 4, 9 and 15 over Dystra et al. is believed to be overcome.

Dystra et al.'s Marine Seat is Not Formed by the Methods Recited in Claim 1

Furthermore, Dystra et al.'s seating apparatus is clearly not

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formed from at least one panel by a method selected from the group consisting of quick plastic forming, super plastic forming and sheet hydro-forming.

as required by claim 1. As explained above with respect to the rejections under Sempionius et al., these process limitations impart distinctive structural characteristics to the automotive seat frame and must be considered by the Examiner. For at least these reasons as well, claim 1 and claims 2, 4, 9 and 15 which depend therefrom are not anticipated or made obvious by Dystra et al.

Claim 4 has been amended to include a limitation removed from amended claim 1; that is:

one of the lower seat bottom panel portion and the back bottom panel portion has a surface substantially juxtaposed with a surface of a respective one of the lower seat top panel portion and the back top panel portion.

Furthermore, claim 9 has been amended to specify that a surface of the back bottom panel portion is substantially juxtaposed with a surface of the back top panel portion and to require that the back bottom panel portion is "substantially parallel and coextensive with said surface of the back top panel portion." Because the recited surfaces are parallel, the flanges 70, 80 and 72, 78 may be connected (see Figure 3), allowing both the back bottom panel portion and the back top panel portion to provide the load bearing and support functions of an automotive seat frame.

As best shown in Figure 3, Applicants' Species I has a lower seat bottom panel portion 26 separated from a back bottom panel portion 34 by a third bend 40 (bend 40 labeled in Figure 2) such that a surface of the back bottom panel portion 34 is substantially parallel and coextensive with a surface of the back top panel portion 30. The mating of the flanges or otherwise securing of the seat portions as described in paragraph [0043], lines 5-17, also implies that the back bottom panel portion 34 is substantially parallel and coextensive with the back top panel portion 30. (Amended claim 4 also reads on the species

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of Applicants' Figures 7A-7B, both with respect to the back portion 98C and the lower seat portion 96C.)

Dystra et al.'s seating apparatus referred to by the Examiner does not disclose all of the limitations of amended claim 9. Specifically, Dystra et al.'s seating apparatus of Figure 7, referred to by the Examiner, does not have a surface of a back bottom panel portion that is "substantially parallel and coextensive with [a] surface of the back top panel portion" as required by claim 9. Dystra et al.'s back top panel portion 86 does not have a surface of the "back bottom panel portion [that is] substantially parallel and coextensive with a surface of the back bottom panel portion" (i.e., Dystra et al.'s leg 99), as required by amended claim 9. (In fact, none of Dystra et al.'s four surfaces: back 86, bench portion 33, footrest 28 and the leg 99 that extends from footrest portion 28 (see Figure 11) have surfaces that are substantially parallel or coextensive with one another.) Accordingly, for this reason as well, the rejection of claim 9 as anticipated by Dystra et al. under Section 102(b) is believed to be overcome.

"An obviousness rejection requires some teaching, suggestion or motivation to modify or combine the references." (MPEP 2143.01) "The desirability for making the proposed modification or combination must be found in the references or in the Examiner's line of reasoning." (MPEP 706.02(j)). Dystra et al. provides no motivation or suggestion for making a surface of the back 86 substantially parallel and coextensive with a surface of the leg portion 99 as required by claim 9. In fact, the acute angle formed between bench portion 28 and leg portion 99 and the obtuse angle formed between back portion 86 and bench portion 33 appear to make any such arrangement unachievable, even if Dystra et al. provided a suggestion or motivation to provide such an arrangement, which it does not.

For at least this reason as well, the rejection under Section 102(b) (or alternatively under Section 103(a)) of amended claim 9 is believed to be overcome.

Claim 11: Obvious over Dystra et al. in view of Vishey et al.

The Examiner relies upon Vishey et al. to provide the matable seat track member of claim 11 that is missing from Dystra et al. Again, a *prima facie* case of obviousness requires that the prior art references teach or suggest all claim limitations of the examined claim. (MPEP 2143.03). Because claim 11 depends from claim 1, and because

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Dystra et al. does not provide all of the elements and limitations of amended claim 1 (see above discussion), the combination of Dystra et al. and Vishey et al. cannot make claim 11 obvious. For at least this reason, the rejection of claim 11 under Section 103(a) is believed to be overcome.

Furthermore, even if the combination of Dystra et al. and Vishey et al. provided all of the elements and limitations (which it does not), a person of ordinary skill in the art would not be motivated to make the combination because to do so would render the seating apparatus of Dystra et al. inoperable for its intended purpose: there is no apparent way to mate the seat frame (86, 33, 28, 99) of Dystra et al. to a seat track member while still allowing Dystra et al. to be transformed from the bench-type seating apparatus of Figure 7 to the lounge-type seating apparatus of Figure 11. The Examiner has not explained how Dystra et al. could be mated with a seat track member and still be moved from the position shown in Figure 7 to that of Figure 11. The Vishey et al. reference, which does not even show a seat track member and only mentions the existence of one matable with the more conventionally-shaped seat frame disclosed therein (see col. 3, lines 3-6 referred to by the Examiner), would not suggest to one skilled in the art or motivate one skilled in the art to mate Dystra et al.'s seat frame with a seat track member. Therefore, for at least this reason as well, the rejection of claim 11 under Section 103(a) is believed to be overcome.

Claim 21: Obvious over Dystra et al. in view of Rossman

The Examiner relies on Rossman to provide the claimed corrugated portions missing from Dystra. However, Dystra does not provide "a lower seat bottom panel portion that has a surface that is substantially parallel and juxtaposed with a surface of the lower seat top panel portion." Dystra's bench portion 33 and footrest portion 28 are not substantially parallel. In fact, Dystra et al. does not provide any means to hold the footrest portion 28 such that it would be parallel with the bench portion 33. Furthermore, as discussed above with respect to claim 9, the acute angle formed between the leg portion 99 and the footrest portion 28 would cause the leg 99 to interfere with the back portion 86, preventing the footrest portion 28 from being made parallel with the bench portion 33 as required by amended claim 21. Because Dystra et al. does not provide all of the elements and limitations of amended

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claim 21, the combination of Dystra et al. and Rossman cannot make claim 21 obvious. For at least this reason, the rejection of claim 21 under Section 103(a) is believed to be overcome.

Conclusion

In light of the above Amendments to the claims as well as the above arguments, the objection to claim 9 and the rejections of claims 1, 2, 4, 9, 11, 13, 15, 16 and 21 are believed to be overcome.

Respectfully submitted,

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